



CAPE CHARTERS & DRY SUIT SERVICES

## BlueFlash Drysuit Diving Tips

### Tip 1 - Getting Started

Just about all drysuit divers recall how they hated their first few drysuit dives but once past the initial pain they don't look back and never want to dive wet in cold water again. Its like learning to drive – you are going to stall in the traffic a few times and it's not much fun but is there really any other way of getting around town? Most dive shops offer formal drysuit diving courses and they may be an effective way of covering the basics and getting into dry diving but it depends on the skill and experience of the instructor and the course price. If you buy your drysuit from a dive shop then it's a good idea to negotiate to have the course included in the price of the suit. Learning by just diving with an experienced dry diver is fine as long as you cover the basics. These include preventing and dealing with a feet first ascent, controlling a slow ascent from depth and dealing with valve failures and suit flooding.

### Tip 2 - A Suit to Suit

My first drysuit was an unmitigated disaster and I hated it. It was uncomfortable, it leaked badly, the boots were 2 sizes too big and I spent a lot more time drying and patching it than I ever did diving in it. My second drysuit (which I still have) is just perfect. It fits so well and is so comfortable that I could sleep in it, its 100% dry and it's never given me a day's trouble in well over 200 dives. Would you believe I paid more for the first one? It just goes to show how important getting the right suit is to successful dry diving. Make sure you get the right suit from the start. At BlueFlash we are always willing to advise divers looking to buy drysuits – Just phone or e-mail us before you jump in.

### Tip 3 - Powder Puff

Let's face it, latex drysuit seals are not going to last longer than 5 years tops. But why do some divers need to replace their seals after only a few months? Well latex is delicate stuff and it needs to be protected from exposure to the sun, air (the ozone in air eats latex) heat and chemicals. The sun, heat and chemicals part is easy – just keep them away. But how do you keep air away? Pure Talc powder applied liberally on both sides prior to storage is the answer. Talc powder forms a thin protective layer on latex and it also makes the seals slide on easily the next time you get dressed to dive. Avoid using baby powder (scented talc) as there is a chance that the chemical scent could damage latex.

## **Tip 4 - Dry Inside?**

Everyone sprays off their drysuit after a dive and lets it dry in the shade but just about nobody dries the suit on the inside. It drives me crazy! Even if your suit didn't leak during a dive I can state with certainty that there will be wetness inside the suit after the dive. You really should, after drying the outside, turn it inside-out all the way down to the boots, and let the inside dry. It's a bit of a pain but doing this prevents those nasty smells and the buildup of the moisture which is often blamed on non-existent leaks.

Is it the inside or the outside that you want dry anyway?

## **Tip 5 - Drink Up**

Most drysuit divers don't hydrate themselves properly for fear of needing to urinate during a dive. This is a bad idea, in fact it's very dangerous because dive de-hydration is linked to an increased susceptibility to DCS and a host of other unpleasant conditions. The solution is simple – Drink plenty of liquid before the dive but stop 1 to 2 hours before the last pee opportunity. Some drinks pass through much faster than others so you need to get the type of drink you use and the period it will take to pass fine tuned so that you start the dive hydrated but with your bladder as empty as possible. If you still need to pee during your dive then bite the bullet and install a P-valve or P-zip. The valves can be used underwater but unfortunately the connecting plumbing is somewhat cumbersome. For gents, especially technical divers, P-valves are becoming very common. Technical diving ladies can import a device know as a "Shepee" which is glued on (after shaving down there) and then connected to a standard P-valve. The P-zips can't be used underwater but they are very useful for divers that spend long durations in their drysuits on the surface. For women I recommend adult dypers; That sounds terrible but actually modern dypers have very hi-tech gels that absorb huge amounts of liquids and they don't smell or make you look odd. They are also an option for guys that don't want the P-valve plumbing hassles. We keep the valves, zips and dypers in stock.

## **Tip 6 - The Truth about Warmth**

Keeping warm in cold water is all about using the scientific principles of thermal insulation, conduction and dissipation along with an understanding of the human body thermal properties to your advantage. If one considers these factors and you know how drysuit and wetsuit materials work then the following basic conclusions can be made:

- Keep your head warm. Hands and feet are also important but the head is critical.
- The deeper you go the less a wetsuit insulates you. Drysuits are unaffected by depth.
- The physical nature of wetsuit material is important but the thickness is critical.
- Water flow inside a wetsuit (bad fit) completely destroys insulation.
- Drysuits are only as good as their undergarment.
- Undergarments are useless without sufficient air in them.
- Physical movement generates body heat.

If you want to be warmer underwater then I reckon the most important issue is to listen to good and appropriate advice when buying a new drysuit or wetsuit. The vast majority of dive shop sales personnel have no idea about cold water and they will just sell you what they happen to have in stock. Doing some research and talking to several experienced cold water divers makes much more sense.

## **Tip 7 - Why No Dry?**

There is a common misconception among drysuit divers that a little bit of a drysuit leak or just a little bit of moisture finding its way in is fine, everyone has that they say. Well I say that any leak, no matter how small, is not acceptable. You should be 100% dry. Why live with tiny leaks that could be easily fixed? A suit with several pinprick leaks could conceivably be dived in hundreds of times with the owner just accepting that the suit is slightly wet hundreds of times. That's silly, just get those leaks fixed from the start and get new leaks fixed as soon as they occur.

## **Tip 8 – Touchy Feely**

Wearing nice thick 5mm neoprene gloves or better still, dry gloves is great for keeping your hands warm in cold water but every time I promote them to cold divers I get the “but then I can't feel anything” line. What exactly do you need to feel? I suppose those little buttons on a digital camera might be tricky but everything else can be operated perfectly using really thick gloves. It just takes practice and sensible gear selection. Steer clear of small buttons on power inflators and hoods without a sufficiently gripable rim around the face opening. You need hats on your inflator hoses. These are little plastic rings that go over the connection to make them easy to disconnect. I can supply them. It helps to avoid fancy octo clips. Rather have your octo kept DIR style with a bungee cord around your neck. Use the largest available size brass or stainless steel spring-clips (dog leash type) for attaching all your paraphernalia and you're sorted. No feeling required.

## **Tip 9 – Too Big For Your Boots?**

Do you know what they say about drysuits with big boots? They probably belong to a diver with small feet. I estimate that at least half of South African drysuit divers have boots on their drysuits which are the wrong size. What a pain! Either they flop about and make swimming difficult or they are uncomfortably tight even with thin socks. The solution is simple – visit the BlueFlash drysuit workshop in Tokai, find a pair that fits and we will pop them on for you. We do it all the time and have a big selection of used and new boots to choose from. Suits with socks for over-boots can also be converted to normal drysuit boots.

## **Tip 10 – Shell or Neoprene?**

Since sport diving in drysuits began, the suits have been made in either a laminated shell fabric or with neoprene. The debate over which material is best has raged for years and I'm afraid to say it will never end because there simply can never be a clear winner. Both materials have their pros and cons and there are also numerous variants of each type, all with their own specific properties. If you happen to find yourself in the position of needing to choose which type to use then my tip will be: Don't listen to just one sales person's advice. Get advice from divers that dive where you will dive and divers that use both types of drysuit. It gets confusing because somehow everyone thinks what they use or sell is best. Just take your time and get it right the first time.

## **Tip 11 – Tendon Trouble**

Many drysuit divers find that their suits have leaks at their wrists and sometimes their necks, because the seals can't seal over their protruding arteries and veins. It is most common with skinny divers or divers that hold onto things tightly. Here is my list of solutions in order of decreasing effectiveness/ increasing lunacy:

- Get tighter seals. Wrist seals can be very tight but tight neck seals are dangerous.
- If you are using neoprene seals then replace them with latex seals which don't have a join/seam and generally seal better.
- Get yourself some Apollo Bio Seals. These are wrist and neck bands made out of a very soft and flexible gel. They conform to the shape of tendons much better than latex so a better seal is guaranteed. They are separate loose items with the suits latex or neoprene seals just sealing on top of them.
- Wrist seals can sometimes be pulled down the arm a few inches away from the wrists where tendons are more pronounced.
- Get dry gloves that have their own seal over your wrist seals. A double seal.
- Insulation tape wrapped around the area where the skin meets the wrist seal works well but the glue on the tape could harm latex seals.
- Don't hold onto anything too tightly. The more you squeeze the more you leak.
- Hair on the wrists and neck don't help the seal. Shave it off.
- Don't twist your neck around so much. If your buddy insists on swimming behind you then accidentally kick his/her mask off until you rectify this.
- Eat fatty foods and don't exercise. Seals on plump soft wrists and necks won't leak.

## **Tip 12 – Don't Go with the Flow**

Air flowing around inside your drysuit makes for a really unpleasant dive as buoyancy and trim are difficult to control. Its mostly flow from the top part of the body into the legs and boots which leads to that horrible feet-up position which is irritating and potentially dangerous. So what can be done? Firstly one must realize that you may simply have too much air in the suit to begin with. There are a few reasons for this: It may be because you are carrying too much weight and using your suit for buoyancy (not a good idea) or you may need that air to make an inferior quality inner suit warm enough. It could also be that your suit and in particular the boots are too big for you and there is more excess volume than there should be. Secondly, one can stop the flow by wrapping your legs with gaiters. Drysuit legs have to be quite wide, more so in tri-lam suits, because you need to get your feet through them to get the suit on but that excess volume just allows the air to flow easily. Leg gaiters that fit between the ankle and below the knee are very effective. BlueFlash supplies very good and comfortable neoprene gaiters with wide velcro strips as fasteners. One could also use wetsuit pants over your drysuit to similar effect. I recommend these solutions over the use of ankle weights as they prevent the problem rather than trying to solve it.

## **Tip 13 - Latex Allergies**

Some divers develop a skin rash when they use latex seals. It happens most often with latex neck seals worn for long periods. If you have this problem then all you can do is convert to neoprene seals or buy Apollo Bio Seals which act as a barrier between the latex and the skin. Contact BlueFlash for prices or more info.

## Tip 14 – Climate Control

Unfortunately Cape Town cold water diving often happens when the air temperature is quite high. I sometimes see fully kitted drysuit divers standing around waiting for their dive in a blazing hot car park - Are you crazy? Here are some tips on keeping cool before the dive:

- Kit up in the shade. If there is no shade then bring you beach umbrella along and set it up next to your car.
- Wet the outside of the suit. The evaporation will cool you down.
- Wait in the water. You can float about next to the boat or jetty while waiting.
- Keep the top part of your drysuit and inner undone/off before the dive.
- If the boat trip is fairly long ask the skipper to stop so that you can take a quick dip.
- For shore dives; never climb down steps or paths fully kitted if it's hot. Rather carry everything down to the waters edge and kit up there.
- Wear a big hat. Having your head in the shade makes a big difference.

## Tip 15 – Buoyancy Blues

All drysuit divers know how dry diving buoyancy is quite different and more difficult to control than wetsuit buoyancy. You have a second inflatable device in a rather strange shape with air flowing around in there. Here are a few tips to help you keep control:

- Don't use the suit for buoyancy. The BC/wings are for buoyancy and the suit for warmth. Only add enough air to the suit to prevent squeeze.
- Never add weight with the intent of having more air in your suit so that you will have more insulation and be warmer. We used to do that when we were young and stupid – Trust me, it's a bad idea because the extra air forms bubbles at high points in the suit. It does not increase the thickness of the insulating layer anywhere else, so it's like folding a jersey and tying it to your back instead of wearing it the normal way.
- A good quality inner suit is essential as it will keep you warm with less air and hence less buoyancy control problems.
- It takes longer than you think to dump the air from your suit so that you can begin your descent. Think of all that fabric that traps air in you inner suit. It's not like a BC/wing – it may take up to 10 seconds of continuous dumping to get it all out.
- Position your weights low down and forward. Lots of drysuit divers use tank weights and a weight belt but I prefer having weight lower and further to my front like with a weight belt and BC pocket weights.
- Gaiters are better than ankle weights when it comes to keeping your feet down.
- Heavy fins, like Jetfins, are also useful at keeping your feet down and the air in the top half of the suit.
- If you have a variable dump valve and you are new to using it you will be tempted to fiddle with it and make small adjustments all the time. Experienced variable dumpers only touch it 3 times during a dive.

Grant Whitford  
BlueFlash Dive Charters and Drysuit Repairs  
5 Glenbrae Avenue, Tokai, Cape Town

[grant@blueflash.co.za](mailto:grant@blueflash.co.za) Cell: 073 1676677